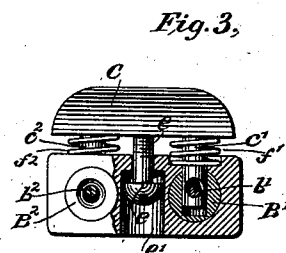
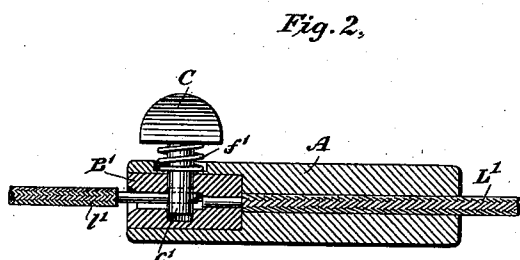
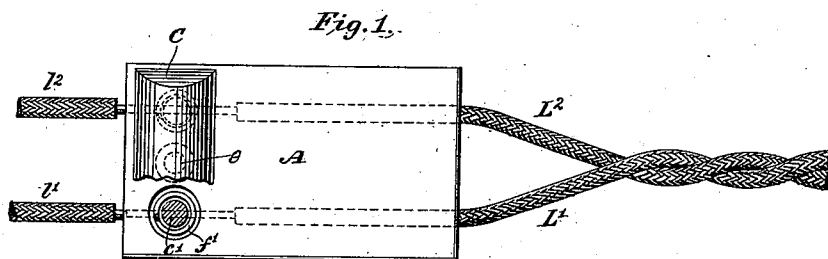


(No Model.)

P. LANGE.
ELECTRIC COUPLING DEVICE.

No. 374,843.

Patented Dec. 13, 1887.



Witnesses

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UNITED STATES PATENT OFFICE.

PHILIP LANGE, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO THE WEST-
INGHOUSE ELECTRIC COMPANY, OF SAME PLACE.

ELECTRIC COUPLING DEVICE.

SPECIFICATION forming part of Letters Patent No. 374,843, dated December 13, 1887.

Application filed September 1, 1887. Serial No. 248,482. (No model.)

To all whom it may concern:

Be it known that I, PHILIP LANGE, a citizen of the United States, residing in Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Electric Coupling Devices, of which the following is a specification.

The invention relates to a device employed for forming temporary connections between electric conductors.

The special object of the invention is to provide a convenient coupling device for connecting the small conductors leading from the leading-in wires of incandescent electric lamps with conductors leading from a generator or source of electricity, so that the lamp may be conveniently connected in an electric circuit while it is upon the exhausting apparatus. The device, however, is applicable to other uses.

The device is constructed in the following general manner: A block of insulating material carries two movable connecting-pins extending, respectively, through two conducting tubes or plates. The latter constitute the terminals of an electric circuit, and are designed to receive other conductors. The pins are normally forced outward by suitable springs. Through each pin there is an opening transverse to its axis, and when the pins are pressed in these openings are coincident with the corresponding openings in the terminal plates. By pressing the pins inward and inserting the conductors and then releasing the pins the conductors will be bound securely in position. A single handle is preferably employed for forcing both pins inward.

The invention will be described in detail in connection with the accompanying drawings, in which—

Figure 1 is a plan view, partly in section, of the coupling device; and Fig. 2 is a longitudinal section of the same. Fig. 3 is an end view, partly in section.

Referring to the figures, A represents a block of insulating material, such as hard rubber or vulcanized fiber. Two conductors, L' and L², extend longitudinally through the block A, and terminate in two conducting blocks or tubes, B' and B². These blocks enter the block A at the end opposite the conductors L' L²,

and they are provided with longitudinal openings b' b² for receiving the conductors l' l². The blocks or terminals B' and B² are provided with openings transverse to the openings b' b², and these receive the coupling-pins C' and C², respectively. The pins are supported by a handle, C, of non-conducting material—such, for instance, as hard rubber or vulcanized fiber. A guide pin or screw, e, extends through a suitable opening in the block A and enters the handle C. The head of the screw plays within a larger opening, e', and thus allows the handle C to move toward and from the block A without permitting it to be removed therefrom. Suitable springs, f' and f², surround the pins C' and C² and normally press them upward from the block A.

When the handle C is pressed toward the block A, the openings in the respective pins are brought opposite the openings in the terminals B' and B², and the conductors l' and l² may be readily inserted. The handle C is then released, and the springs, forcing the pins outward, cause the conductors l' and l² to be gripped between the two blocks. The openings b' and b² preferably extend beyond the pins C' and C², so that the ends of the wires may be caught upon both sides of the pins, as shown in Fig. 2. Preferably the outer ends of the openings b' and b² are widened, as shown, so that the conductors may be more easily inserted.

The device constructed in this manner is convenient for receiving conductors of various sizes, and is especially useful in coupling very small conductors with the terminals of a source of electricity.

I claim as my invention—

1. The combination, with a block of insulating material and two blocks of conducting material placed therein, of two conducting-pins, said blocks and pins having openings normally out of alignment with each other, and means for temporarily placing these openings in alignment with each other, substantially as described.

2. A coupling device for electric conductors, consisting of two conducting-tubes, movable pins, respectively extending into said tubes, openings in said pins corresponding to the openings in the tubes, and means normally tending

to place the openings in the pins out of alignment with the openings in the tubes.

3. The combination, with the block A and the conducting tubular terminals B' and B² carried thereby and having the openings b' and b², of the pins C' and C², extending within said blocks, respectively, the handle C therefor, the springs tending to force the pins outward, and the guide-pine e, extending through the block A into the handle C.

4. The combination, with two electric conductors and tubular terminals for the same, of a support common to both, transverse open-

ings in said terminals, conducting-pins extending into said openings, said pins having openings for receiving electric conductors, and means for moving said pins to and fro in the tubular conductors, substantially as described.

In testimony whereof I have hereunto subscribed my name this 1st day of July, A. D. 1887.

PHILIP LANGE.

Witnesses:

W. D. UPTGRAFF,
CHARLES A. TERRY.